

A

MUSCLE-N
 m MGGQITRNTIHD-----SIGGSFPVPS-----HRCHHKQKHCPTTSLG-----

BRAIN-N
 m MGNFSSVSSLQRGNSRASRG--EPQNLKE-----SIGGSFPVPS-----HRCHHKQKHCPTTSLG----- 55
 r MGNFSSVSSLQRGNSRASRG--EPQNLKD-----SIGGSFPVPS-----HRCHHKQKHCPTTSLG----- 55
 h MGNFSSVSSLQRGNSRASRG--EPQNLKD-----SIGGSFPVPS-----HRCHHKQKHCPTTSLG----- 55
 d MGLSDIPANYMQGSHHTLTLRPQQQHONQQHLQHLQMQQLHNAMPTPAQAAQVLAMESNELLMSTKDKLSSKKKELLKKIKKRFGL 90

NLS1
 m -----GGLPATPLLFPHTRKSCQLMDLSHKAVKQASFCNAITFSNRPLYIEQVRLKITKQCCWSGALRLGFTSKDPSRIHPD 136
 r -----GGLPATPLLFPHTRKSCQLMDLSHKAVKQASFCNAITFSNRPLYIEQVRLKITKQCCWSGALRLGFTSKDPSRIHPD 136
 h -----GGLPATPLLFPHTRKSCQLMDLSHKAVKQASFCNAITFSNRPLYIEQVRLKITKQCCWSGALRLGFTSKDPSRIHPD 136
 d VRRSPSSCPFNNLPLQPH-SVHCNDNRISRDTGLARFESFCRAITFSARPRIINERICVSPAEISNNNGGIRFGFTSNDP-VTLEG 178

NLS2
 m -----GGLPATPLLFPHTRKSCQLMDLSHKAVKQASFCNAITFSNRPLYIEQVRLKITKQCCWSGALRLGFTSKDPSRIHPD 136
 r -----GGLPATPLLFPHTRKSCQLMDLSHKAVKQASFCNAITFSNRPLYIEQVRLKITKQCCWSGALRLGFTSKDPSRIHPD 136
 h -----GGLPATPLLFPHTRKSCQLMDLSHKAVKQASFCNAITFSNRPLYIEQVRLKITKQCCWSGALRLGFTSKDPSRIHPD 136
 d VRRSPSSCPFNNLPLQPH-SVHCNDNRISRDTGLARFESFCRAITFSARPRIINERICVSPAEISNNNGGIRFGFTSNDP-VTLEG 178

NHR1
 m SLPKYACPDVLSQSCFWAKALFEFANECHIIAFWVDKRGVRYRINESAAMLFFSGVRTVDFLWALVDVYGLTRGVQLLDS----- 218
 r SLPKYACPDVLSQSCFWAKALFEFANECHIIAFWVDKRGVRYRINESAAMLFFSGVRTADPLWALVDVYGLTRGVQLLDS----- 218
 h SLPKYACPDVLSQSCFWAKALFEFANECHIIAFWVDKRGVRYRINESAAMLFFSGVRTADPLWALVDVYGLTRGVQLLDS----- 218
 d TLPKYACPDVLSQSCFWAKALFEFANECHIIAFWVDKRGVRYRINESAAMLFFSGVRTADPLWALVDVYGLTRGVQLLDSRIYMYQQQ 268

LRS1 *
 m SLPKYACPDVLSQSCFWAKALFEFANECHIIAFWVDKRGVRYRINESAAMLFFSGVRTVDFLWALVDVYGLTRGVQLLDS----- 218
 r SLPKYACPDVLSQSCFWAKALFEFANECHIIAFWVDKRGVRYRINESAAMLFFSGVRTADPLWALVDVYGLTRGVQLLDS----- 218
 h SLPKYACPDVLSQSCFWAKALFEFANECHIIAFWVDKRGVRYRINESAAMLFFSGVRTADPLWALVDVYGLTRGVQLLDS----- 218
 d TLPKYACPDVLSQSCFWAKALFEFANECHIIAFWVDKRGVRYRINESAAMLFFSGVRTADPLWALVDVYGLTRGVQLLDSRIYMYQQQ 268

O
 m ELVLDCLEERSFTALRRSLRCEADE-----ARLSVSICDLNVSGADGDDGAPPAG--CPIPONSLNSQHSRALE-A 288
 r ELVLDCLEERSFTALRRSLRCEADE-----ARLSVSICDLNVSGADGDDGAPPAG--CPIPONSLNSQHSRALE-A 288
 h ELVLDCLEERSFTALRRSLRCEADE-----ARLSVSICDLNVSGADGDDGAPPAG--CPIPONSLNSQHSRALE-A 288
 d PAATMATVDAQQQMPQDAANASSALNSHHPHQSSRRSLPGHTAIEHDLERHVMPSLQSLHAGNCGSVASVEQAIAHDLANGEPPL 358

PKB
 m ELVLDCLEERSFTALRRSLRCEADE-----ARLSVSICDLNVSGADGDDGAPPAG--CPIPONSLNSQHSRALE-A 288
 r ELVLDCLEERSFTALRRSLRCEADE-----ARLSVSICDLNVSGADGDDGAPPAG--CPIPONSLNSQHSRALE-A 288
 h ELVLDCLEERSFTALRRSLRCEADE-----ARLSVSICDLNVSGADGDDGAPPAG--CPIPONSLNSQHSRALE-A 288
 d PAATMATVDAQQQMPQDAANASSALNSHHPHQSSRRSLPGHTAIEHDLERHVMPSLQSLHAGNCGSVASVEQAIAHDLANGEPPL 358

NHR2
 m QLDG-----DLRFHALRAQAVRILDEQTVARLEHGRDERALVTSRPFVSAVATIFIKVTRSGGGRAGALSFCVTTCDPGTLEFADLFFS 373
 r QLDG-----DLRFHALRAQAVRILDEQTVARLEHGRDERALVTSRPFVSAVATIFIKVTRSGGGRAGALSFCVTTCDPGTLEFADLFFS 373
 h QLDG-----DLRFHALRAQAVRILDEQTVARLEHGRDERALVTSRPFVSAVATIFIKVTRSGGGRAGALSFCVTTCDPGTLEFADLFFS 373
 d RYNANGRLIPVPEHT-KERNVLSQDRFVASRTESDFCQGYVETAREIRIGKLIVCLKTEQMYVGAIALGLTSNEMAMCFNDLEND 447

LRS2 *
 m PEALVDRKEFWAVCR-VPGPLHSGDILGLVNNADGELHLSHNGAAGMOLCVDAQPLMMLFSLHCATITQVRILGSTIMTERGGP----- 457
 r PEALVDRKEFWAVCR-VPGPLHSGDILGLVNNADGELHLSHNGAAGMOLCVDAQPLMMLFSLHCATITQVRILGSTIMTERGGP----- 457
 h PEALVDRKEFWAVCR-VPGPLHSGDILGLVNNADGELHLSHNGAAGMOLCVDAQPLMMLFSLHCATITQVRILGSTIMTERGGP----- 457
 d SDFELDRPEYVWVSKDIAAAPQRSEIAFFVAPNGEVSISKNGPNAVVMHVQDSLOLWAFLDVYGSTQSLMFRQQLPNMVAYSPQPQV 537

SP1
 m -----SLPCSPASTFTSPSALGIRLSD-----PLSTCGSGPLGGSAGG-----TARNSPVSLPESVTPGLGQWSD--- 519
 r -----SLPCSPASTFTSPSALGIRLSD-----PLSTCGSGPLGGSAGG-----TARNSPVSLPESVTPGLGQWSD--- 519
 h -----SLPCSPASTFTSPSALGIRLSD-----PLSTCGSGPLGGSAGG-----TARNSPVSLPESVTPGLGQWSD--- 519
 d NVNASSSSACNAASSRMLPMTESMSLNAGATAKLLHHPSSLVACSTSTLASAGGVNGSRMISMENGDILQIQNGGSTVLVVNLP 627

O
 m -----SLPCSPASTFTSPSALGIRLSD-----PLSTCGSGPLGGSAGG-----TARNSPVSLPESVTPGLGQWSD--- 519
 r -----SLPCSPASTFTSPSALGIRLSD-----PLSTCGSGPLGGSAGG-----TARNSPVSLPESVTPGLGQWSD--- 519
 h -----SLPCSPASTFTSPSALGIRLSD-----PLSTCGSGPLGGSAGG-----TARNSPVSLPESVTPGLGQWSD--- 519
 d NVNASSSSACNAASSRMLPMTESMSLNAGATAKLLHHPSSLVACSTSTLASAGGVNGSRMISMENGDILQIQNGGSTVLVVNLP 627

SP2
 m -----SLPCSPASTFTSPSALGIRLSD-----PLSTCGSGPLGGSAGG-----TARNSPVSLPESVTPGLGQWSD--- 519
 r -----SLPCSPASTFTSPSALGIRLSD-----PLSTCGSGPLGGSAGG-----TARNSPVSLPESVTPGLGQWSD--- 519
 h -----SLPCSPASTFTSPSALGIRLSD-----PLSTCGSGPLGGSAGG-----TARNSPVSLPESVTPGLGQWSD--- 519
 d NVNASSSSACNAASSRMLPMTESMSLNAGATAKLLHHPSSLVACSTSTLASAGGVNGSRMISMENGDILQIQNGGSTVLVVNLP 627

RZD
 m HMCDLQYSGLRLKKALH-ACCPICRRPTKDIKTYRSS 574
 r HMCDLQYSGLRLKKALH-ACCPICRRPTKDIKTYRSS 574
 h HMCDLQYSGLRLKKALH-ACCPICRRPTKDIKTYRSS 574
 d HMCDLQYSGLRLKKALH-ACCPICRRPTKDIKTYRSS 574

B

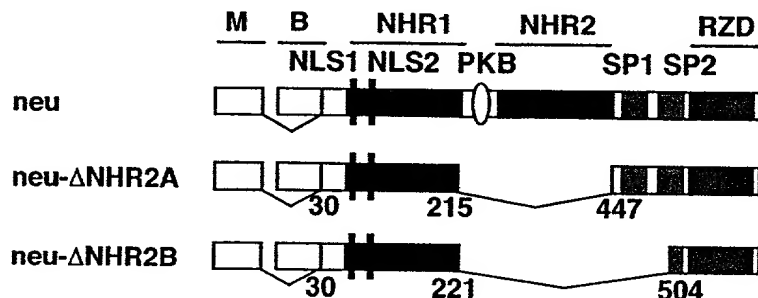
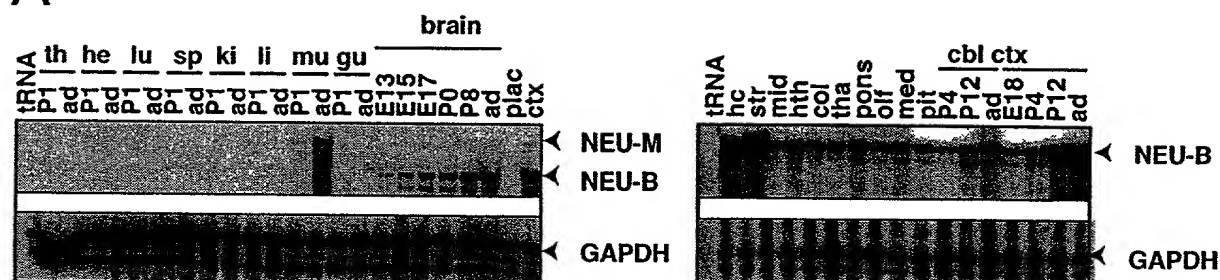


FIGURE 1

A



B

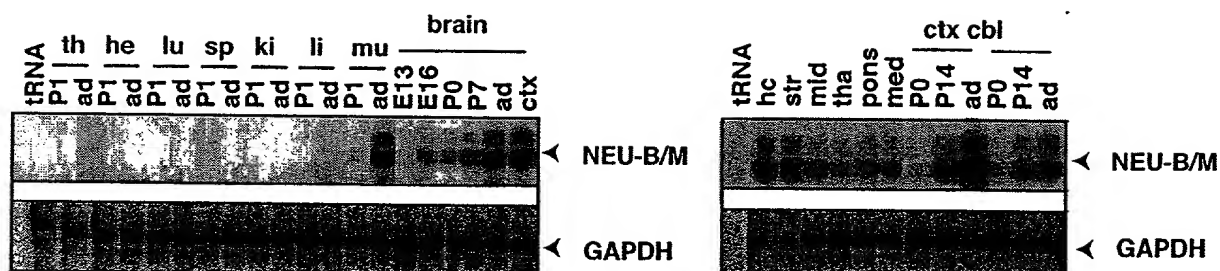


FIGURE 2

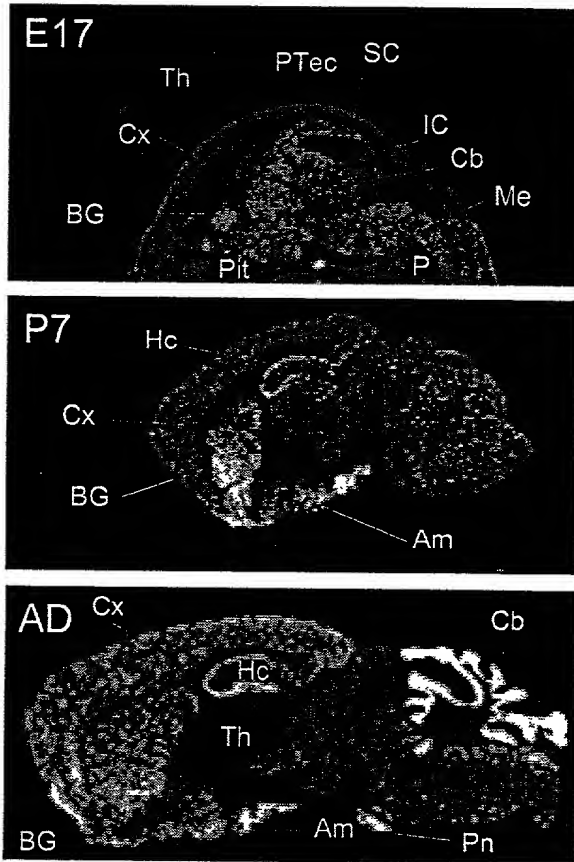


FIGURE 3

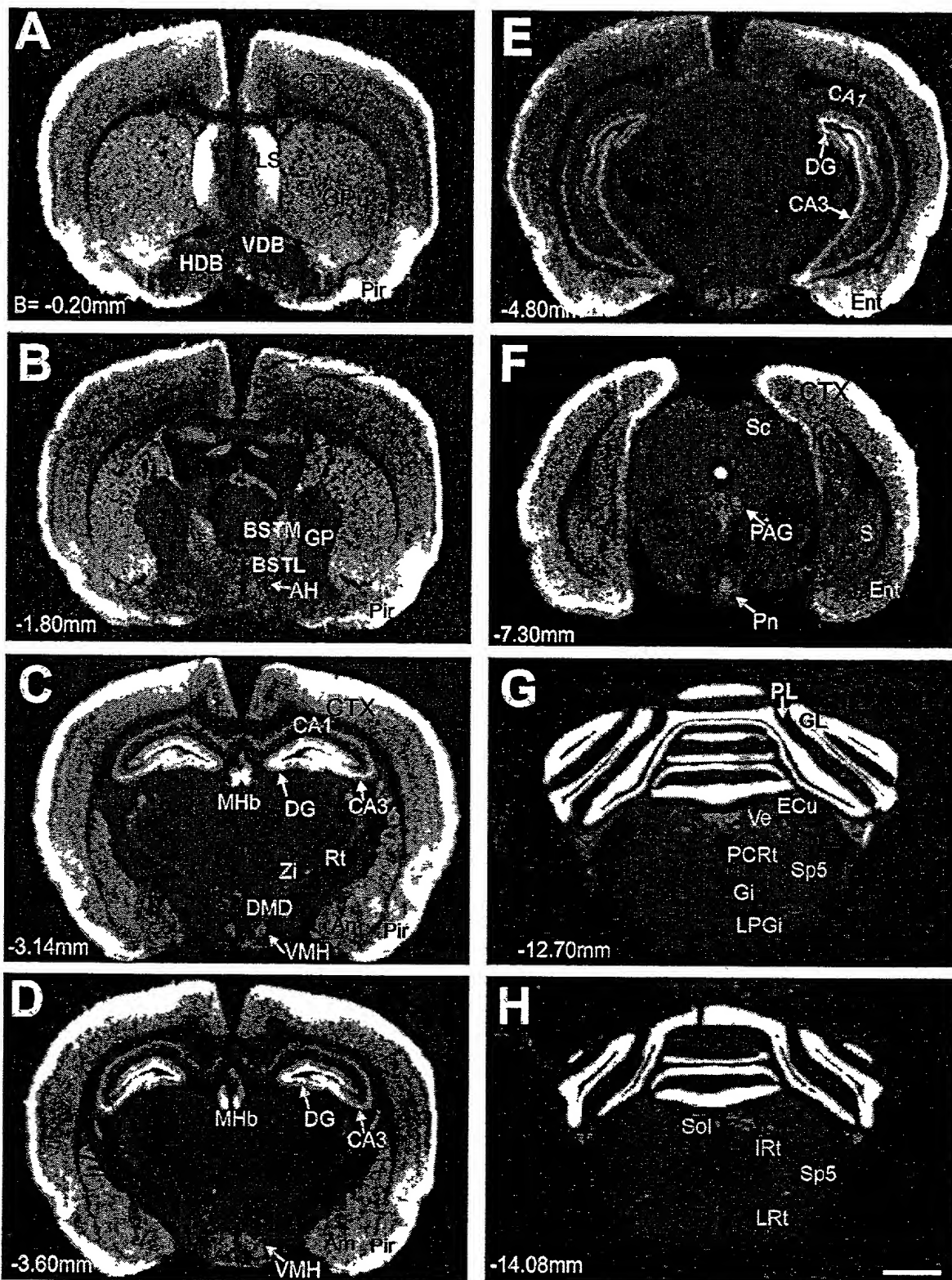


FIGURE 4

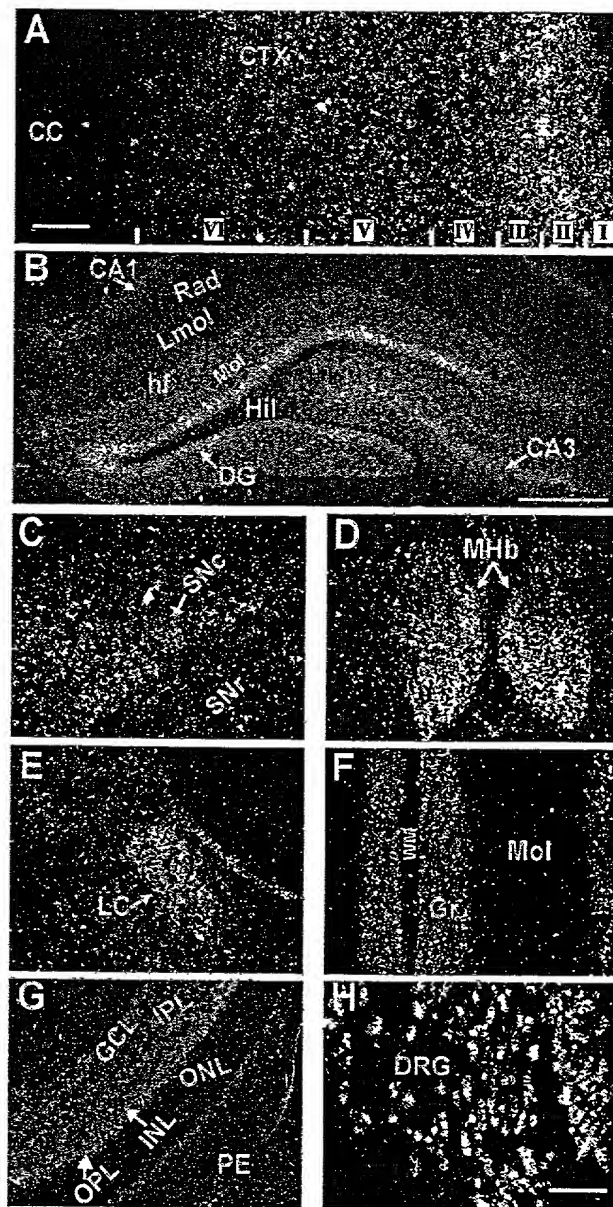


FIGURE 5

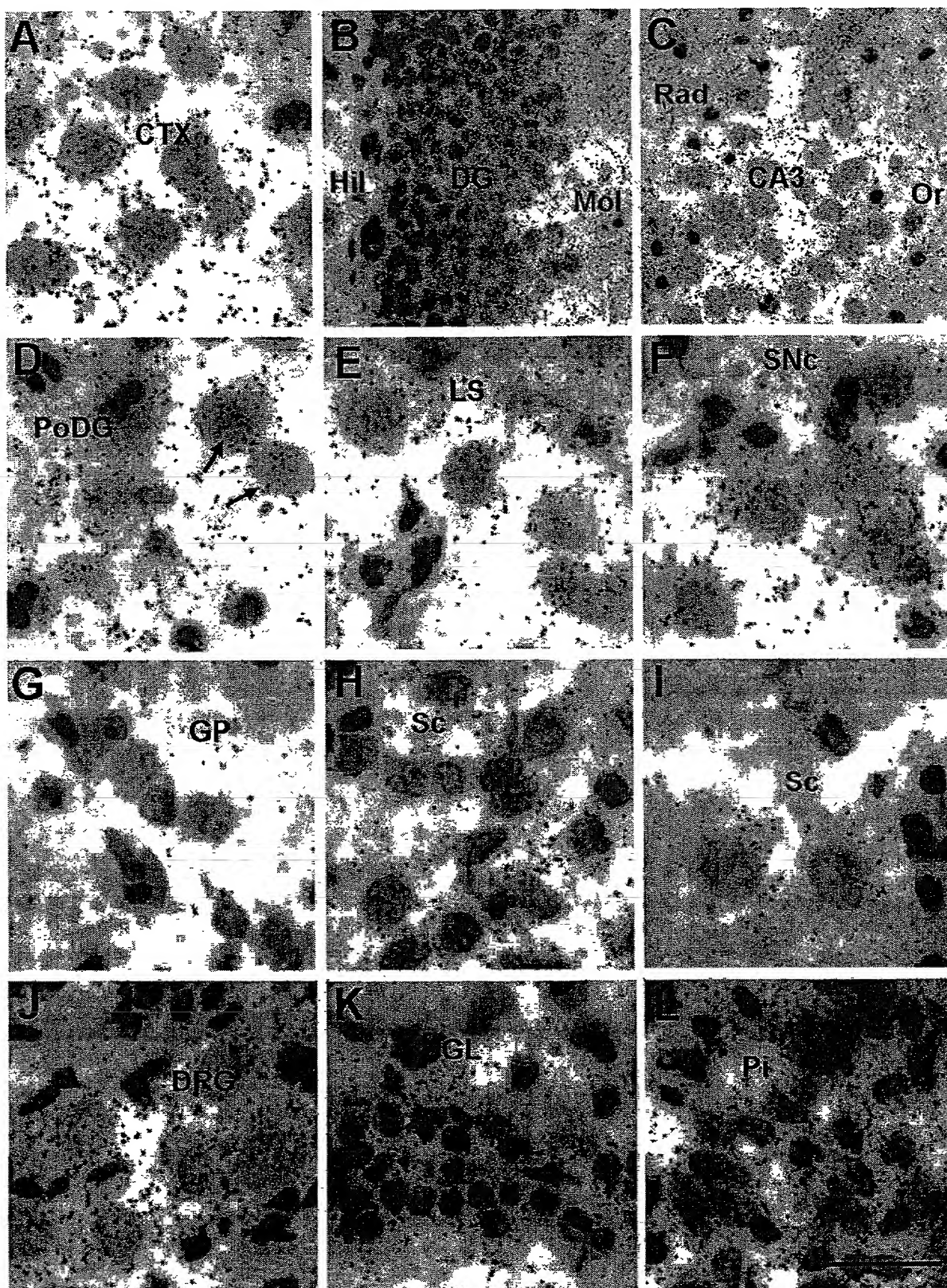


FIGURE 6

1032291 28280860

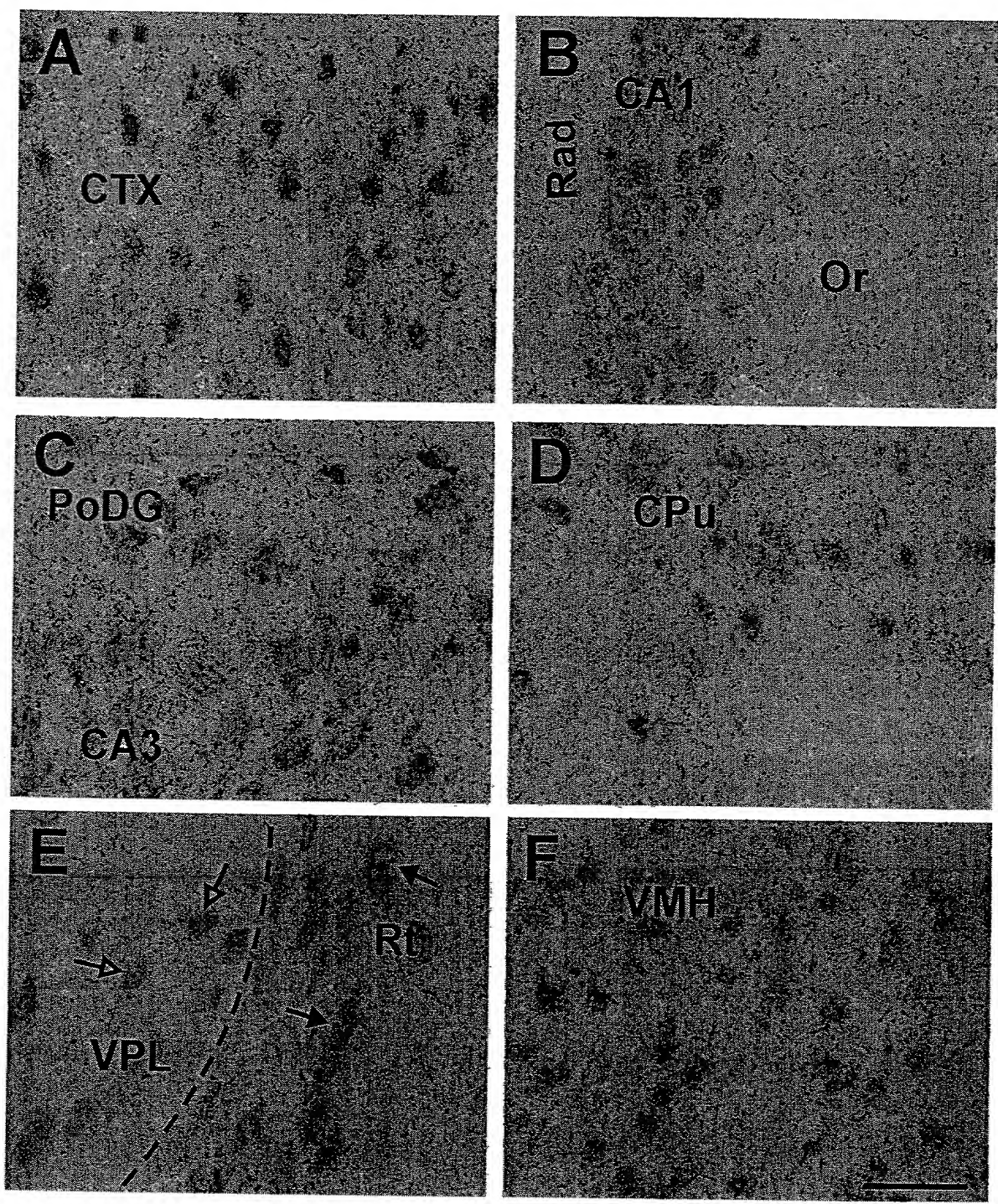


FIGURE 7

05803337.062601

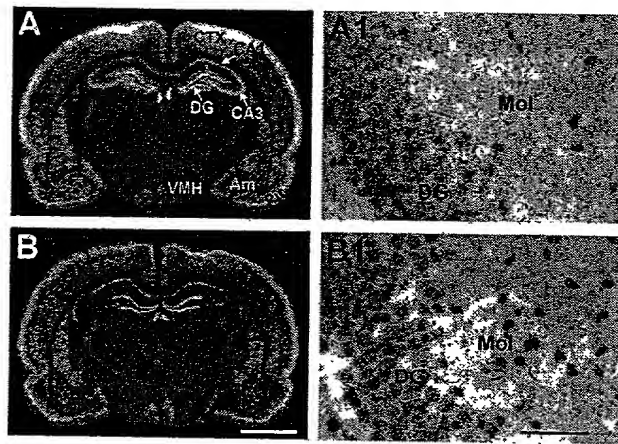


FIGURE 8

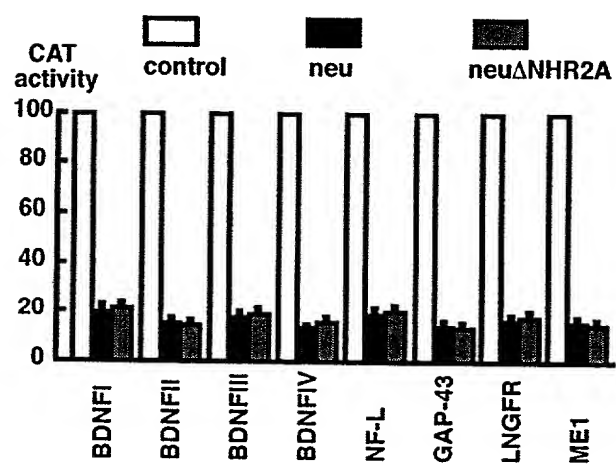


FIGURE 9

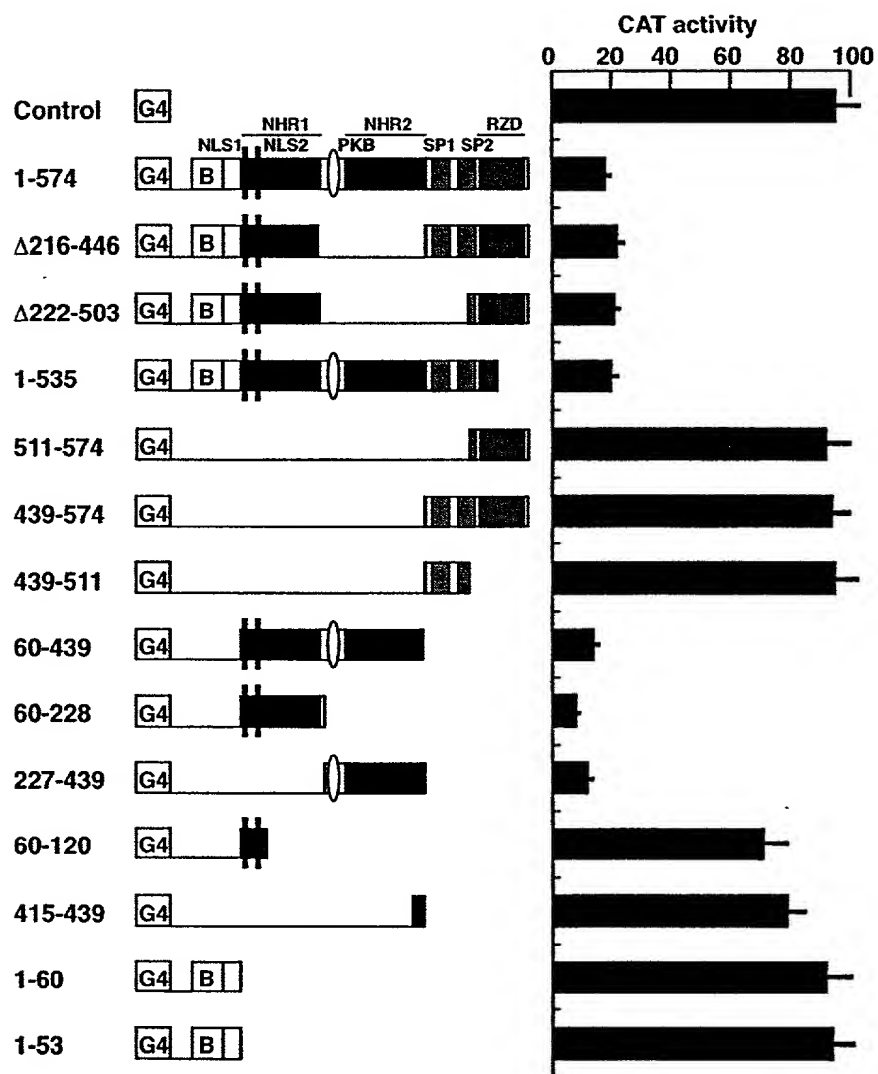


FIGURE 10

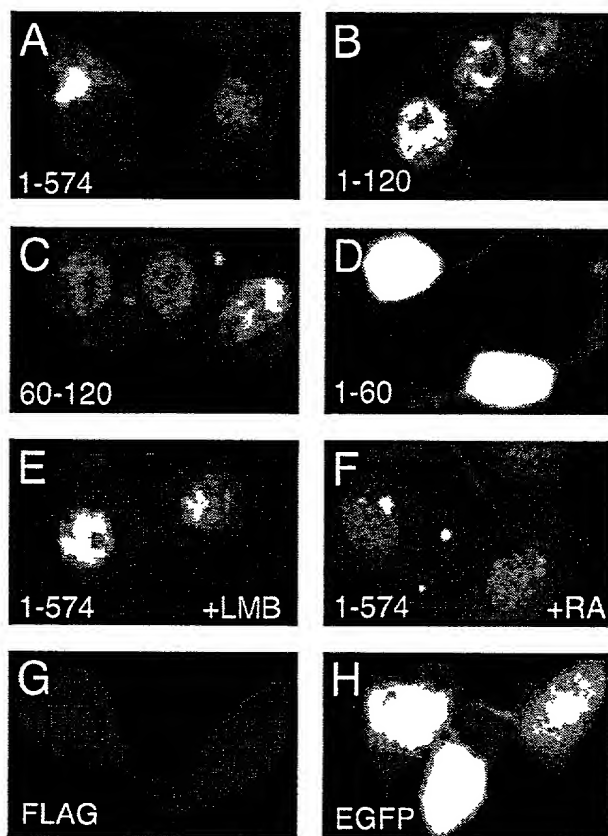


FIGURE 11

h1I FHPHTKGSILMDLSHKAVKR-QASFCNAIFSNRPVLIYEQRKTKKQCCWSCPR
h2I FHAQAKGKNVRLDGHSRRATR-RNSFCNGVFQRPRLYEQRVAVVRPGWSCPR
h3 FHAEAKGAGVRLTRGCTAHR-RTTFHDGIFQRPRLGERALREESGWCGPR
dI FHS-VHGDNRSRDGTIARR-FESFCRAIFARPRIINERCAEISNNWNGPR
dII FHNTK-GRNRLSQDRFVSRTESDFCQGYFARPRIIGEKIYKTEQMYVGA
h2II FHATR-GPDVSSADRKVACAPRPDGGRTIFSRPRLPGESIFGRPGLAAPGA
h1II FHALRAGAVRLDEQTVARVEHGRDERALFSRPRVAETEFVTRSGGARPGAS

h1I GTSKPSRHPDSLPHYACPDLVSGFVKAL-PEEFANEONIAFWVDKKRTHRI
h2I GTAHPSLSAQDIPKYACPDLVTPGYVKAL-PENLALRDTVAYWADRHGRFYSV
h3 GTRLPAOSVPSLPFFLCPDLEEPTAVL-PEGCALTSDLVRFWVDRRGCFKAV
dI GTSNPEVTEG-TLPKYACPDLTNPGEVKAL-HEQYCEKONIIYYVNGAGDIYGI
dII GTSCPAMEQP-NDLPNDSDFLLDRPEYVVS KDIAAAPQRGDETAFFVAPNGEVSISK
h2II GTSCPEGVLP-NELPADPDALLKEYVAR-AGPVPSGGDALSTTLRPGDVLGI
h1II GVTCEPGTLP-ADLPFSPEALVDRKEEVVCR-VPGPLHSGDITGLVVNADGEHLSH

h1I NDSAVMLFFSGVRTADPLWAFVDVYG-LTRGVOLH
h2I NDGEVPLFHCGVAVGGPLWAFVDVYG-ITDEVOLH
h3 NAGCRLLLREGVPVGAPLWAFVDVYG-TTKATELH
dI NNEEKGVILTGDTRSLLTVDVYG-NCTGEELH
dII NNGPAVVVMHVDQSLQLWAFVDVYG-STQSERME
h2II NGRPRGRLLCVDTTQALWAFVARGGVAGQRLH
h1II NGAAAGMQLCVDASQPLWAFVGHG-TITQRLH

FIGURE 12

103390-78880860

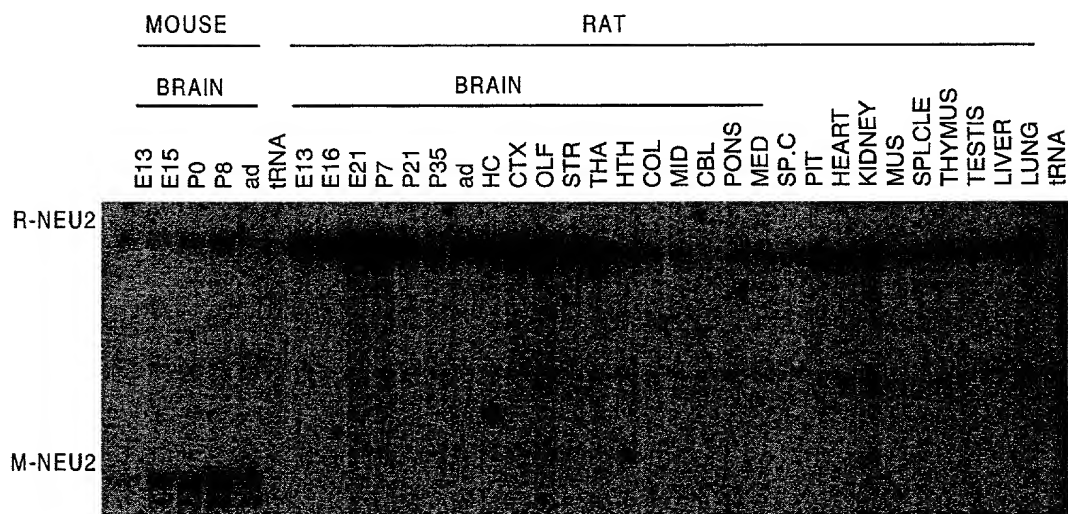


FIGURE 13

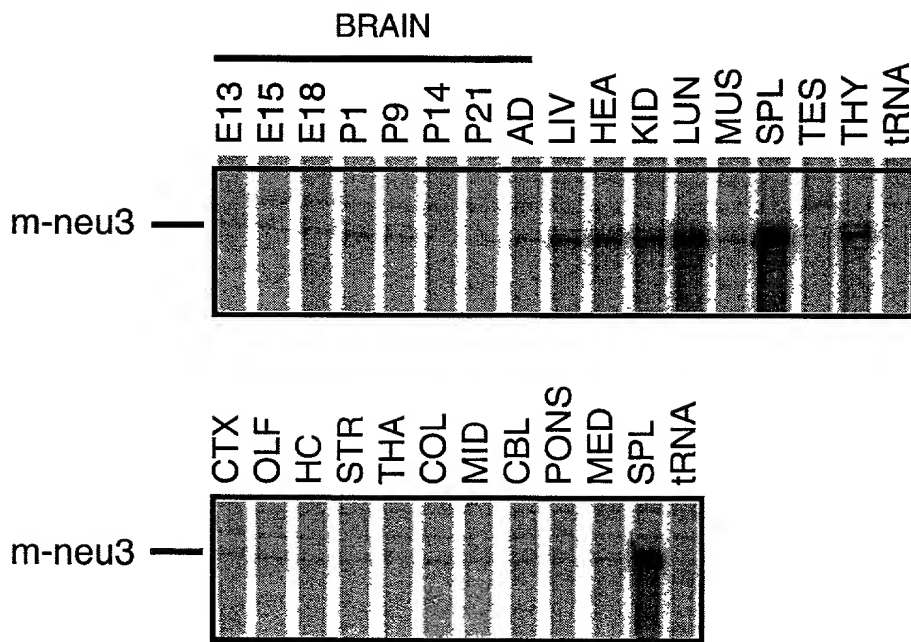


FIGURE 14

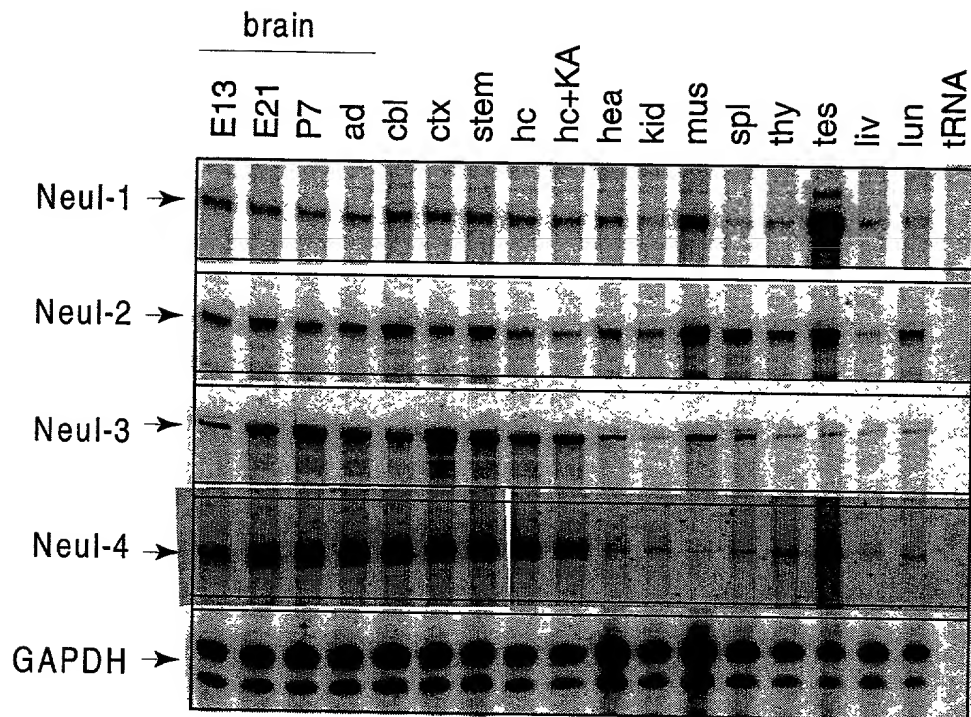


FIGURE 15